

## ABSTRACT

A system that compares, ranks, sorts and grades animals or carcasses into groups of like kinds according to previously determined predicted maximum values. For live animals, the system uses magnetic resonance imaging (MRI) on a single occasion to evaluate the animal and determine a number of days the animal must be fed to reach a maximum value. For carcasses, the system  
5 evaluates the carcass to grade the quality and quantity of meat the carcass will provide. The system also combines MRI imaging with a three-dimensional system to refine the number of days remaining for the animal to reach a maximum value, and the system, when used in a feedlot, will direct the animal to a feed pen based on the number of days remaining for the animal to reach maximum value.